

What is claimed is:

1 1. A virtual reality modeling language
2 (VRML) interface device comprising:

3 a World Wide Web browser wherein said
4 browser includes a VRML viewer plug-in;

5 at least one external database storing a
6 plurality of first image files wherein said plurality
7 of first image files are created on differing
8 software platforms; and

9 a VRML interface software program installed
10 onto said browser wherein said program compiles
11 visual information from said plurality of first image
12 files and creates a second image file based on said
13 plurality of first image files wherein said second
14 image file can be viewed independent of computer
15 platform.

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1 2. The device as recited in claim 1
2 further comprising a database interface to
3 communicate between said browser and said at least
4 one external database.

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1 3. The device as recited in claim 2
2 wherein said database interface is a common gateway
3 interface (CGI).

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1 4. The device as recited in claim 2
2 wherein said database interface is a Java Applets
3 routine.

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15 image file can be viewed independent of computer
16 platform; and
17 a printed circuit board (PCB) assembly
18 facility wherein assembly operators assemble PCBs
19 from said second image file.

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1 10. The system as recited in claim 9
2 further comprising a database interface to
3 communicate between said browser and said at least
4 one external database.

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1 11. The system as recited in claim 10
2 wherein said database interface is a common gateway
3 interface (CGI).

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1 12. The system as recited in claim 10
2 wherein said database interface is a Java Applets
3 routine.

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1 13. The system as recited in claim 9
2 wherein said plurality of first image files is
3 partially comprised of Gerber images of PCB artwork.

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1 14. The system as recited in claim 9
2 wherein said plurality of first image files is
3 partially comprised of CAD images of electronic
4 components used in assembling said PCB.

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1 15. The system as recited in claim 9
2 wherein said plurality of first image files is
3 partially comprised of a VRML database.

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1 16. The system as recited in claim 15
2 wherein said VRML database is partially comprised of
3 fiducials.
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1 17. The system as recited in claim 15
2 wherein said VRML database is partially comprised of
3 reference designators.
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1 18. The system as recited in claim 15
2 wherein said VRML database is partially comprised of
3 2-D coordinate location information for components to
4 be assembled on said PCB.
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1 19. The system as recited in claim 15
2 wherein said VRML database is partially comprised of
3 rotation information for components to be assembled
4 on said PCB.
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1 20. The system as recited in claim 15
2 wherein said VRML database is partially comprised of
3 package type information for components to be
4 assembled on said PCB.
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1 21. The system as recited in claim 9
2 wherein said second image files are composed in a
3 JPEG format that can be viewed independent of
4 computer platform.
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1 22. The system as recited in claim 9
2 wherein said second image files are composed in a GIF
3 format that can be viewed independent of computer
4 platform.

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1 23. A method to generate a second VRML
2 image file based on a plurality of first image files
3 created from differing software platforms comprising
4 the steps of:

5 assembling at least one external database
6 that contains said plurality of first image files
7 created from differing software platforms;

8 loading a VRML interface software program
9 onto a World Wide Web (WWW) browser wherein said
10 program compiles visual information from said
11 plurality of first image files and creates a second
12 VRML image file based on said plurality of first
13 image files wherein said second VRML image file can
14 be viewed independent of computer platform;

15 accessing a WWW server by using said WWW
16 browser and using a database interface to access said
17 plurality of first image files; and

18 downloading said plurality of first image
19 files and using said VRML interface software program
20 to generate said second image file.

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1 24. The method as recited in claim 23
2 further comprising the step of viewing said second
3 image file by utilizing said WWW browser wherein a
4 VRML viewer plug-in is loaded onto said browser.

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